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On November 5, 2001 \_\_\_\_\_

TOWNSEND and TOWNSEND and CREW LLP

By: Paula Faure

PATENT  
Attorney Docket No.: 019496006220

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T.Bray

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Choo et al.

Application No.: 09/424,487

Filed: February 29, 2000

For: NUCLEIC ACID BINDING  
PROTEINS

Examiner: H. Robinson

Art Unit: 1653

**RESPONSE TO RESTRICTION  
REQUIREMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

This paper is filed in response to paper number 18 mailed July 5, 2001. In applicants' view, paper 18 is unclear as to whether a restriction requirement or election of species, or both is/are being imposed, and as to the nature of restriction groups and species that applicants must elect. Applicants have endeavored to respond according to their best understanding of paper 18, but in the event that applicants have misconstrued the Examiner's intent, request that the Examiner clarify what is intended, issue a supplemental requirement, and restart the period for response.

Insofar as paper 18 is meant to be a restriction requirement, the requirement is unclear in that all of the pending claims (claims 1-31) are designated as being in the same group. It is noted that in related copending application 09/424,488,

whose claims parallel in form those in the present case, the Examiner (the same Examiner as here) imposed a restriction requirement between three Groups: Group I was directed to methods of preparing a nucleic acid binding protein; Group II to methods of the determining the presence of a target nucleic acid; and Group III to nucleic acids encoding nucleic acid binding proteins. If the same restriction requirement were made in the present case, Applicants would elect the equivalent of Group I, which in the present case would consist of claims 1-24.

Insofar as paper 18 is meant to be an election of species requirement, the comment that "Applicant need to elect a position to be mutated for purposes of examination" may reflect somewhat of a misunderstanding of what is being claimed at least in the independent claims. Claim 3, which is the most general of the pending claims, recites a method for preparing a nucleic acid binding protein to a four-base target site in which the identity of amino acids occupying certain positions in the protein are interrelated with the identity of nucleotides occupying certain positions in the target site by a series of rules. The claim, as presently formulated, does not however require that the amino acid occupying the specified positions be introduced as a result of mutation (although such is specified in dependent claim 13).

Claim 3 recites sixteen rules that can be subdivided into four groups of four rules, one group for each of the four base positions in the target site, and one rule for each base. Thus, rules (a)-(d) provide four rules for the four bases G, A, T and C for one position (the '5 position) of the target site. Similarly, (e)-(h) provide four rules for the next position of the target site, (i)-(l) provide four rules for the next position and then (m)-(p) provides four rules for the final position of the four-base target site. For any given target site of four bases, one would employ one rule from each of the four groups. Which rule is used from each group would of course vary depending on the nature of the target site. Because the rules within a group are alternatives, only one being selected for any particular target site, a group of four rules can be viewed as a Markush group having four members. Thus, the claim as a whole can be viewed as having four Markush groups corresponding to the four groups of rules for the four bases in the target site. The

structure of the claim is therefore analogous to that of chemical structure having four different R groups, each of which is specified by a different Markush group. According to this analogy, an election of species could require election of one species from each of the four Markush groups, or in the present situation, one rule from each of the four groups of rules recited in claim 3.

Therefore, applicants propose to elect rule (a) from the first group of rules (i.e., a-d) in claim 3; rule (e) from the second group of rules (rules e-h); rule (i) from the third group of rules (i-l) and rule m from the fourth group of rules (rules m-p). Insofar as rule (a) refers to alternative amino acids Arg and Lys, and further election of subspecies might be required, applicants elect Arg. Claims 3-30 read on the elected species (claim 31 has been cancelled).

Applicants further note that notwithstanding the election of species, the Examiner's "action subsequent to an election of species should include a complete action on the merits of all claims readable on the elected species" (MPEP 809.02(c)).

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

  
Joe Liebeschuetz  
Reg. No. 37,505

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, 8<sup>th</sup> Floor  
San Francisco, California 94111-3834  
Tel: (650) 326-2422  
Fax: (650) 326-2422  
JOL:pfh  
PA 3180956 v1